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WAGE AND SALARY EARNINGS: NEBRASKA AND THE U.S.

INTRODUCTION

How do employee wage and salary earnings in Nebraska compare with the rest of the United States? Conventional wisdom indicates that they are lower. If employee earnings in Nebraska are lower, is the difference due to Nebraska's industry mix? That is, is it because Nebraska's employment is concentrated in low wage industries, or is it because Nebraska's earnings are uniformly lower across all industries when compared to the U.S.? This article addresses these issues. We will see that Nebraska earnings are lower than in the U.S., but that Nebraska's employment distribution is not the reason. We see that although earnings are lower for most industries, they are not uniformly lower.

Besides showing how Nebraska earners compare with their U.S. counterparts, the results have direct implications for the promotion of Nebraska as a state with low wages for economic development purposes. Earnings are not low in all industries.

COMPARISON OF U.S. AND NEBRASKA EARNINGS

Table 1 shows annual average earnings in Nebraska and the U.S. during the period 1978 to 1983. The averages are based on wage and salary earnings for 65 industries comprising 96 percent of the total wage and salary employment in both Nebraska and the U.S.. The farm sector, consisting of proprietors, as well as several minor industries with little or no Nebraska wage and salary employment were excluded from the calculations due to data availability. The average earnings were calculated by dividing total wage and salary earnings by the number of persons with wage and salary earnings (hereafter the 'wage and salary' descriptor will be dropped). Both earnings and employment totals include amounts for full time as well as part time and part year workers.

Table 1
Average Annual Earnings (in dollars)
United States and Nebraska
(excluding Farm)

	United States	Nebraska	Nebraska as % of U.S.	Nebraska with U.S. Employment Distribution
1978	11,899	10,348	87.0	10,386
1979	12,906	11,249	87.2	11,261
1980	14,126	12,298	87.1	12,308
1981	15,415	13,361	86.7	13,409
1982	16,427	14,199	86.4	14,211
1983	17,237	14,851	86.2	14,879

Table 1 and the following tables are derived from unpublished Bureau of Economic Analysis tabulations of employment and earnings by two digit SIC codes, August 1984.

Average annual earnings in Nebraska were about 86 percent of U.S. average annual earnings in 1983. The one percentage point decline in the ratio between 1979 and 1983 suggests a very slight downward trend in the ratio of Nebraska to U.S. average earnings, but cannot be considered significant due to the short length of the period examined.

Graph 1 shows the relationship for the seventeen year period for which data are available. Increases in Nebraska average earnings have closely paralleled the U.S. increases. The ratio of Nebraska to U.S. earnings was between 85.3 percent (1971) and 87.3 percent (1979) for each year during the entire interval, with no indication of a long term trend upward or downward. The 1967 ratio (86.2 percent) is almost idential to the 1983 ratio (86.3 percent).

IMPACT OF INDUSTRY MIX

Nebraska's industrial composition is one possible source of its lower average earnings. Table 2 compares U.S. and Nebraska employment distributions across eleven major industries (the 65 industries examined in this study have been aggregated to 11 in Table 2).[1] Of particular significance is the relative size of the state's manufacturing sector. Manufacturing--particularly durable goods manufacturing--has traditionally been a high wage industry. In Nebraska 12.7 percent of employment was in manufacturing, compared to 17.7 percent for the United States. This difference is entirely due to Nebraska's smaller durable goods manufacturing sector which accounted for only 6.4 percent of the state's employment compared to 11.7 percent for the U.S.. The size of the transportation, communication, and utilities sector is also worth noting. We will see that Nebraska's larger share of employment in this sector offsets the negative impact of the smaller durable goods manufacturing sector.

To examine the impact of Nebraska's employment distribution among industries on earnings, average Nebraska earnings were calculated for each of the 65 industries included in the study. An 'all industry' weighted average earnings was calculated by summing over the 65 average industry earnings using U.S. employment by industry as weights.[2] The result is what Nebraska's average earnings would have been if employment

(continued on page 2)

(continued from page 1)

Table 2
Distribution of Employment, 1983 (percentages)
(excluding Farm)

Industry	U.S.	Nebraska
Agriculture Services	0.6	0.5
Mining	0.8	0.3
Construction	4.3	3.7
Nondurable Manufacturing	6.0	6.3
Durable Manufacturing	11.7	6.4
Transportation, Communication, Utilities	5.2	6.9
Wholesale Trade	5.8	7.2
Retail Trade	17.0	17.5
Finance, Insurance, Real Estate	6.1	6.6
Services	23.0	21.9
Government	20.4	22.8
TOTAL	100.0	100.0

May not sum to 100 due to rounding.

in Nebraska were distributed the same as in the U.S.. This average was calculated for each of the years 1978 through 1983. These averages are shown in the last column of Table 1.

In 1983 average annual earnings for the U.S. were $17,237, while average earnings in Nebraska were $14,851. Average Nebraska earnings would have been $14,879 if Nebraska had the United States employment distribution. Examination of Table 1 indicates that the net impact of Nebraska's employment distribution, although negative, was virtually zero in 1983 and for the previous years as well.

Although the different Nebraska and U.S. employment distributions had no net impact, Nebraska earnings are not uniformly lower across all industries. Nor is the impact of Nebraska's employment distribution uniform across all industries.

COMPARISONS BY INDUSTRY

Table 3 compares U.S. and Nebraska average earnings for each of 65 industries examined in this study. Examination of this table indicates considerable variation among industries in how Nebraska earnings compare with the U.S.. Average earnings are considerably higher in Nebraska in four categories: furniture and fixture manufacturing; security and commodity brokers; combined real estate and insurance; and military. With the exception of military, the first column of Table 3 shows that each accounts for a small part of total Nebraska employment (less than 1 percent). Nebraska's food manufacturing and railroad transportation industries are among the larger sectors in terms of employment and have average earnings that compare favorably with the U.S.. Wholesale trade and health services also account for a relatively large share of Nebraska's employment, but average earnings in Nebraska in these sectors are lower than corresponding U.S. averages.

Chart 1 summarizes Table 3 by showing 1983 average earnings for eleven aggregate industries and for all industries combined. Average U.S. earnings, Nebraska earnings, and Nebraska earnings assuming U.S. employment distribution are shown for each industry. The transportation, communication, and utilities sector is of particular interest. Average earnings in Nebraska

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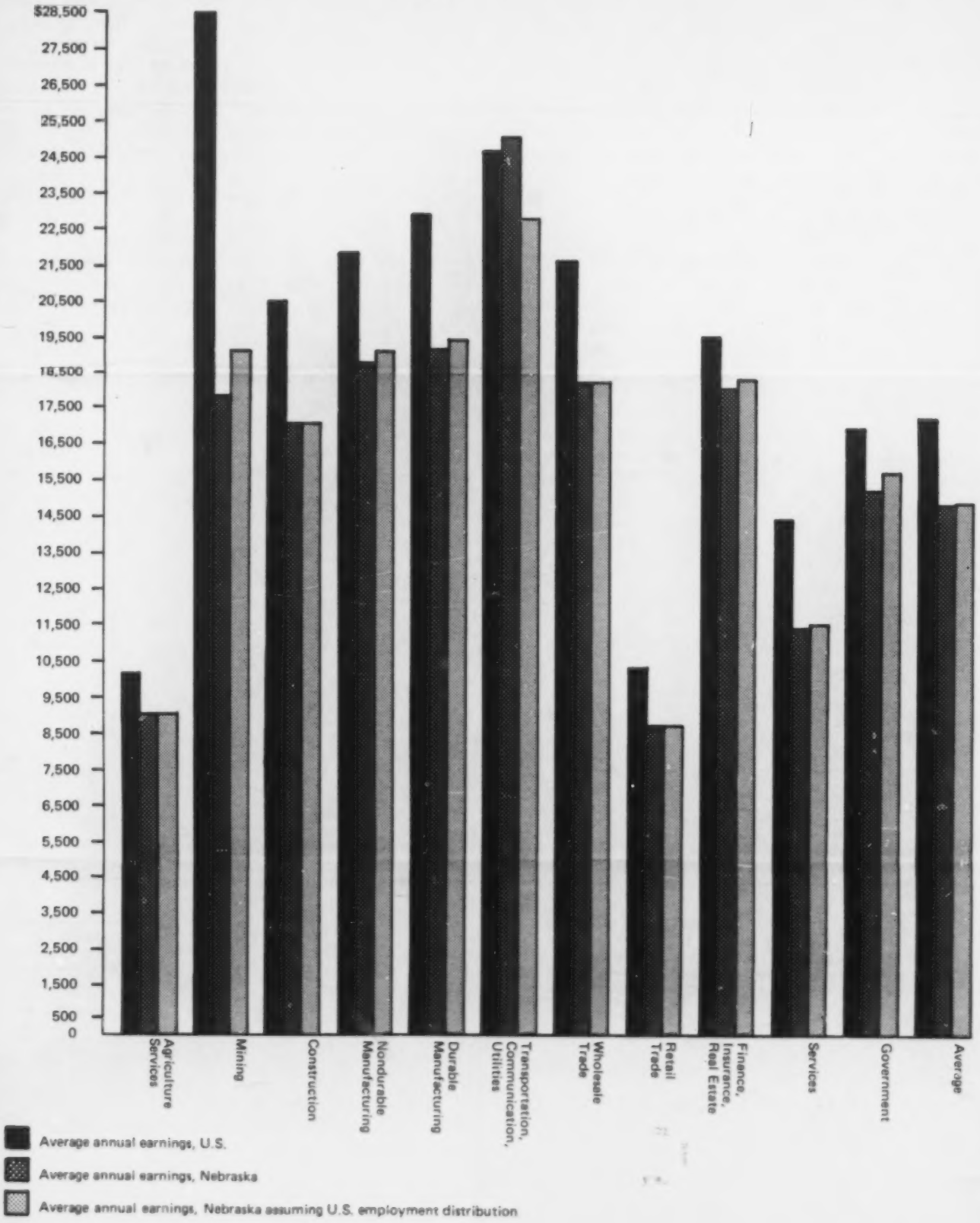
Table 3
Average Earnings by Industry, 1983
($)

Industry	(%) Share of State Employment	Nebr.	U.S.	Nebr. / U.S.
Agricultural Services	0.54	8,978	10,086	89
Mining				
Oil & Gas Extraction	0.14	19,573	29,604	66
Nonmetallic Materials	0.15	16,231	22,236	73
Construction				
General & Building Contractors	1.04	16,526	19,661	84
Heavy Construction Contractors	0.69	19,310	24,384	79
Special Trade Contractors	1.94	16,318	19,485	84
Manufacturing-Nondurable Goods				
Food & Kindred Products	3.84	19,263	19,199	100
Paper & Allied Products	0.22	18,415	24,148	76
Printing & Publishing	1.22	15,719	19,119	82
Chemicals & Allied Products	0.39	22,678	27,381	83
Petroleum & Coal Products	0.03	20,095	34,047	59
Rubber & Misc. Plastics	0.61	19,900	19,224	104
Durable Goods				
Lumber & Wood Products	0.28	16,264	16,491	99
Furniture & Fixtures	0.24	18,559	15,297	121
Primary Metal Industries	0.19	23,384	25,940	90
Fabricated Metal Products	0.04	20,000	21,100	95
Machinery, except Electrical	1.62	20,854	23,924	87
Electric & Electronic Equipment	1.21	19,947	22,575	88
Transportation Equip.	0.33	19,261	27,733	69
Motor Vehicles & Equip.	0.35	18,671	29,172	64
Stone, Clay & Glass Products	0.40	18,031	21,322	85
Instruments & Related Products	0.57	15,585	23,155	67
Misc. Manufacturing Industries	0.22	13,392	16,775	80
Transportation, Communication, Utilities				
Rail Transportation	2.12	31,966	31,934	100
Trucking & Warehousing	1.77	19,518	20,469	95
Local & Interurban Transit	0.18	12,821	13,908	92
Air Transportation	0.14	19,522	29,338	67
Transportation Services	0.23	17,401	17,394	100
Communication	1.84	24,933	26,344	95
Electric, Gas & Sanitary Services	0.64	26,017	27,472	95
Wholesale Trade	7.21	18,217	21,591	84
Retail Trade				
Building Materials & Farm Equip.	0.80	11,958	13,818	87
General Merchandise Stores	2.21	9,234	10,133	91
Food Stores	2.56	9,892	11,596	85
Auto Dealers & Service Stations	2.25	13,129	15,251	86
Apparel & Accessory Stores	1.00	7,728	9,171	84
Furniture & Home Furn. Stores	0.60	12,494	13,347	94
Eating & Drinking Places	6.11	5,667	7,240	78
Misc. Retail Stores	1.92	8,873	10,913	81
Finance, Insurance & Real Estate				
Banking	1.70	16,795	17,384	97
Credit Agencies, except Banks	0.76	16,822	17,382	97
Security & Commodity Brokers	0.21	53,307	45,734	117
Insurance Carriers	2.50	18,124	20,269	89
Ins. Agents, Brokers & Serv.	0.58	15,773	19,162	82
Real Estate	0.69	11,904	14,771	81
Combined R.E., Insurance, etc.	0.07	17,871	15,875	113
Holding & Other Investment Co.	0.07	26,219	29,823	91
Services				
Hotels & Other Lodging Places	1.08	7,337	11,152	66
Personal Services	1.04	9,371	10,305	91
Private Households	1.80	3,309	4,575	72
Business Services	3.18	11,976	15,915	75
Auto Repair, Service & Garages	0.63	13,090	14,095	93
Misc. Repair Services	0.29	13,432	16,561	81
Amusement & Recreation Services	0.79	6,592	11,171	59
Motion Pictures	0.15	5,889	18,078	33
Health Services	7.28	14,250	17,134	83
Legal Services	0.49	17,770	24,463	73
Educational Services	1.45	9,865	12,601	78
Social Services	1.07	9,915	9,310	106
Museums, Botanical/Zoological Gardens	0.04	8,870	12,216	73
Membership Organizations	1.85	9,061	11,235	81
Misc. Services	0.75	20,684	24,308	85
Government & Government Enterprises				
Federal, Civilian	2.56	22,625	24,130	94
Military	2.87	16,711	13,033	128
State & Local	17.39	13,884	16,087	86

Chart 1
Average Annual Earnings, 1983



Review and Outlook

Output from the Nebraska economy increased sharply in November 1984. The Bureau of Business Research's net physical volume index jumped 4.3 percent on a month to month basis. All components of the economy, with the exception of construction, recorded gains.

Data revision in the agriculture component accounts for part of the change in the index. Revised data from the United States Department of Agriculture boosted the agriculture component 35.5 percent in Nebraska over the interval October-November 1984. A similar increase was recorded in the United States, although the magnitude was considerably smaller.

Recent information released on grain stocks indicates that plains farmers and ranchers have liquidated grain. One can only speculate that such liquidation is an indication of financial stress.

Prices received by Nebraska producers are 2.0 percent above year ago levels, while United States agriculture producers received prices 2.4 percent higher than one year ago.

The nonagriculture components of the Nebraska economy recorded a solid month to month gain of 1.3 percent. The construction component declined 0.8 percent October-November 1984.

(continued on page 5)

Notes for Tables 1 and 2: (1) The "distributive" indicator represents a composite of wholesale and retail trade; transportation, communication and utilities; finance, insurance, and real estate; and selected services. (2) The "physical volume" indicator and its components represent the dollar volume indicator and its components adjusted for price changes using appropriate price indexes—see Table 5, page 5.

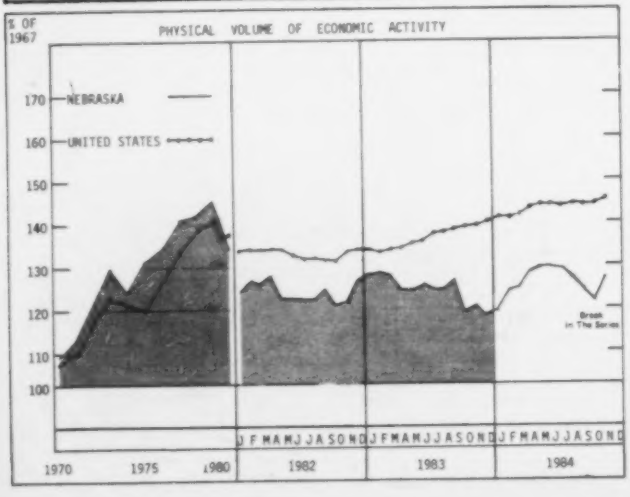
ECONOMIC INDICATORS: NEBRASKA AND UNITED STATES

1. CHANGE FROM PREVIOUS YEAR

November 1984	Current Month as Percent of Same Month Previous Year		1984 to date as percent of 1983 to date	
Indicator	Nebraska	U.S.	Nebraska	U.S.
Dollar Volume	111.6	108.3	105.5	109.8
Agricultural	120.9	108.7	89.0	96.2
Nonagricultural	110.6	108.3	107.9	110.1
Construction	104.2	118.4	121.5	118.5
Manufacturing	108.5	107.2	112.8	112.4
Distributive	107.7	108.4	104.1	109.5
Government	129.1	106.4	114.3	106.6
Physical Volume	105.9	104.5	100.9	105.4
Agricultural	118.5	106.2	85.9	90.4
Nonagricultural	104.5	104.5	103.3	105.9
Construction	100.3	113.9	117.3	114.4
Manufacturing	106.3	105.3	109.8	109.6
Distributive	103.6	104.2	99.8	105.0
Government	106.1	101.3	104.6	100.7

2. CHANGE FROM 1967

	Percent of 1967 Average	
Indicator	Nebraska	U.S.
Dollar Volume	371.0	432.8
Agricultural	276.1	332.6
Nonagricultural	385.2	436.0
Construction	286.6	420.8
Manufacturing	379.4	330.3
Distributive	385.3	496.2
Government	452.8	437.1
Physical Volume	127.3	145.9
Agricultural	109.1	128.4
Nonagricultural	130.0	146.4
Construction	82.3	120.9
Manufacturing	151.7	129.7
Distributive	122.2	157.4
Government	159.4	149.5

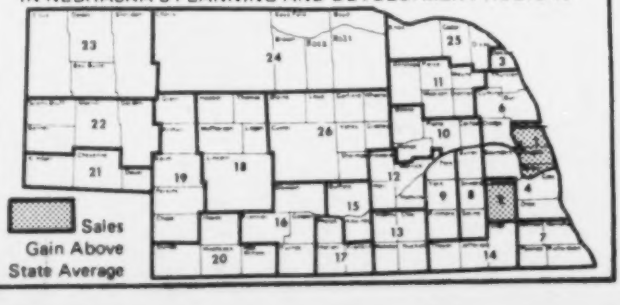


3. NET TAXABLE RETAIL SALES OF NEBRASKA REGIONS AND CITIES

Region Number[1] and City	City Sales[2] Nov. 1984 as percent of Nov. 1983	Sales in Region[2] Nov. 1984 as percent of Nov. 1983	Sales in Region[2] 1984 to date as percent of 1983 to date
The State	106.4	106.8	108.7
1 Omaha	112.5	112.9	115.3
Bellevue	115.3		
Blair	105.7		
2 Lincoln	105.4	108.7	112.2
3 So. Sioux City	105.9	107.4	105.9
4 Nebraska City	109.7	106.2	100.0
6 Fremont	104.1	102.2	99.8
West Point	99.0		
7 Falls City	103.8	107.3	96.9
8 Seward	98.6	103.0	100.9
9 York	102.6	104.2	101.6
10 Columbus	107.8	104.1	102.4
11 Norfolk	105.0	102.8	99.5
Wayne	96.4		
12 Grand Island	100.9	103.0	103.7
13 Hastings	111.6	103.7	102,7
14 Beatrice	98.7	97.1	95.4
Fairbury	98.0		
15 Kearney	109.5	107.6	104.2
16 Lexington	100.1	96.6	96.6
17 Holdrege	102.5	96.6	97.4
18 North Platte	97.1	95.9	100.0
19 Ogallala	102.2	107.4	101.3
20 McCook	111.8	109.8	100.5
21 Sidney	107.5	105.5	103.6
Kimball	101.3		
22 Scottsbluff/Gering	105.5	103.0	100.4
23 Alliance	103.6	106.4	99.5
Chadron	106.6		
24 O'Neill	105.3	101.0	95.1
25 Hartington	109.7	105.0	91.7
26 Broken Bow	99.9	101.0	93.6

[1] See region map below.
[2] Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales; city totals exclude motor vehicle sales.
Compiled from data provided by Nebraska Department of Revenue.

1984 YEAR TO DATE AS PERCENT OF 1983 YEAR TO DATE IN NEBRASKA'S PLANNING AND DEVELOPMENT REGIONS



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Manufacturing registered a 2.3 percent gain, while distributive trade recorded a 1.2 percent gain, and government a 0.8 percent jump. The increase in manufacturing represents a solid monthly gain after months of little change.

November 1984 retail sales were 6.8 percent above year ago levels. When adjustments are made for price changes, total retail sales were up 3.4 percent. Inflation, as measured by the commodity component of the consumer price index, continues to record very little change--it advanced only 2.8 percent over the past 12 months ending November 1984.

Nonmotor vehicle sales in November were 6.4 percent above year ago levels, or 3.5 percent higher when adjustments are made for price changes. November marks the second month for which comparisons can be made on nonmotor vehicle sales without the distortion of the removal of the sales tax on food. Total dollar sales were $661 million in November 1984, compared with $621 million one year ago.

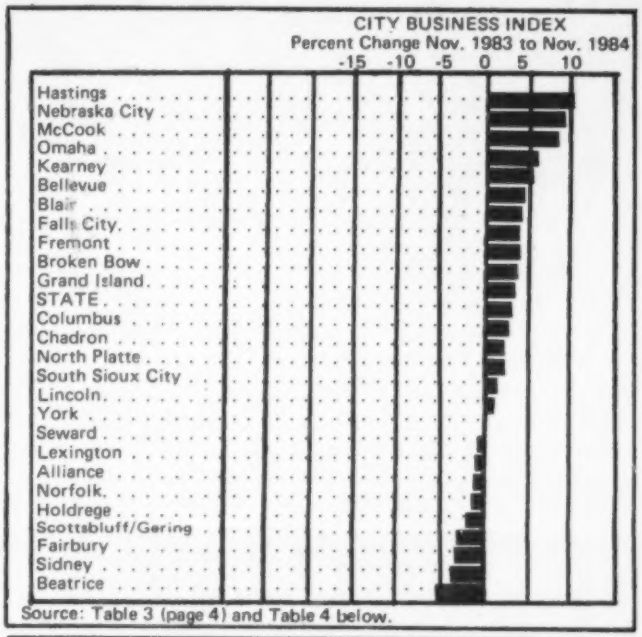
Motor vehicle sales rose 10.4 percent on a dollar volume basis in November 1984 compared with one year ago. When adjustments are made for price changes, motor vehicle sales were up 2.8 percent in real terms. The motor vehicle price index used in adjusting for price changes was 7.4 percent higher in November 1984 than in November 1983.

Cities recording substantial month to month gains included Hastings, Nebraska City, McCook, Omaha, and Kearney. All these communities experienced gains of 5.0 percent or more in their city business indexes. Bellevue, Blair, Falls City, Fremont, Broken Bow, and Grand Island recorded gains larger than the state average. The increase in Hastings resulted from improved retail sales and construction activity, while the increase in Nebraska City was associated with gains in retail sales.

Nebraska's economy continues to expand slowly. Third quarter 1984 personal income increased 9.3 percent over the third quarter of 1983. It is anticipated that output from the Nebraska economy will increase 2.0 to 3.0 percent in 1985. Remember that output is a physical measure of the volume of goods and services produced by the Nebraska economy.

Nebraska income should also continue to grow in 1985. Personal income should increase around 6.0 percent before adjustment for price changes. Employment will expand slowly, increasing 1.0 to 1.5 percent over the coming 12 months.

DONALD E. PURSELL



Source: Table 3 (page 4) and Table 4 below.

4. November 1984 CITY BUSINESS INDICATORS

The State and Its Trading Centers	Percent of Same Month a Year Ago		
	Employment[1]	Building Activity[2]	Power Consumption[3]
The State	101.8	107.2	105 1
Alliance	101.2	73.5	125.0
Beatrice	100.4	44.3	78.0
Bellevue	101.2	72.2	77.4
Blair	101.2	154.6	102.2*
Broken Bow	101.9	221.3	119.4
Chadron	114.0	29.5	135.6
Columbus	100.1	100.4	103.7
Fairbury	101.6	62.2	99.8
Falls City	100.8	187.9	105.9
Fremont	101.8	165.7	83.6*
Grand Island	101.6	196.4	120.0
Hastings	101.8	332.6	NA
Holdrege	101.2	62.6	116.9
Kearney	104.6	104.6	130.3
Lexington	100.7	108.5	119.0
Lincoln	102.1	83.0	109.3
McCook	99.7	243.0	97.7
Nebraska City	101.1	311.7	108.1
Norfolk	101.4	59.7	99.9
North Platte	104.8	159.1	115.9
Omaha	101.2	125.2	102.3
Scottsbluff/Gering	101.1	34.0	117.5
Seward	101.7	114.1	114.5
Sidney	100.0	28.2	126.6
So. Sioux City	98.7	112.4	109.8
York	101.3	89.9	105.4

[1] As a proxy for city employment, total employment for the county in which a city is located is used.

[2] Building Activity is the value of building permits issued as spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Construction Cost Index is used to adjust construction activity for price changes.

[3] Power Consumption is a combined index of consumption of electricity and natural gas except in cases marked * for which only one is used.

Source: Compilation by Bureau of Business Research from reports of private and public agencies.

5. PRICE INDEXES

November 1984	Index (1967 = 100)	Percent of Same Month Last Year	Year to Date as Percent of Same Period Last Year*
Consumer Prices	315.3	104.0	104.3
Commodity component	283.0	102.8	103.4
Wholesale Prices	310.4	101.6	102.5
Agricultural Prices			
United States	259.0	102.4	106.4
Nebraska	253.0	102.0	103.4

*Using arithmetic average of monthly indexes.
Sources: Consumer and Wholesale Prices: U.S. Bureau of Labor Statistics; Agricultural Prices: U.S. Department of Agriculture.

(continued from page 2)

exceed the U.S. in this sector. This is because Nebraska has a larger share of employment in the higher earnings railroad and trucking industries within this category. This is the only aggregate category where Nebraska's employment distribution is more favorable than the United States. In seven other categories, average earnings in Nebraska are lower than the U.S. in part because of the industry employment distribution within the aggregate category. The positive impact of Nebraska's employment distribution in the transportation, communication, and utilities sector offsets the negative distribution effects in the other aggregate categories resulting in the minor overall impact shown in Table 1 earlier.

SUMMARY OF FINDINGS

Wage and salary earnings in Nebraska averaged about 86 percent of the U.S. level in 1983. This ratio changed less than one percent during the six year period examined. There are important differences in Nebraska's distribution of employment (particularly manufacturing) when compared to the U.S., but the net impact of these differences on earnings is nearly zero. The employment distribution in Nebraska did not contribute to lower average earnings. Although overall average earnings are lower in Nebraska when compared to the U.S., there is considerable variation in the Nebraska to U.S. ratio from industry to industry. Particularly noteworthy are the food manufacturing and railroad transportation industries where average earnings in Nebraska equal those in the U.S..

These findings raise additional questions. Do living cost or 'quality of life' differences account for the observed earnings difference between Nebraska and the United States? To what extent does unionism contribute to the Nebraska U.S. differential as well as the industry to industry difference in the Nebraska to U.S. ratios? These are issues requiring additional research.

DOUGLAS O. LOVE

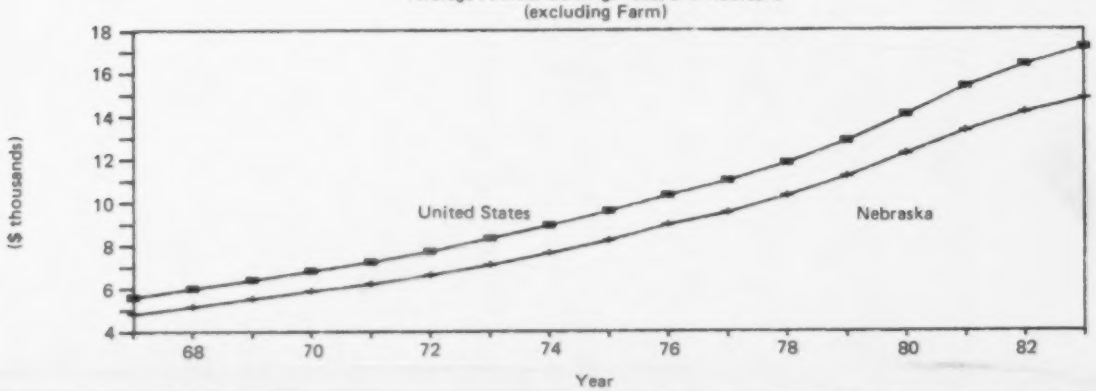
[1]See the March 1984 *Business in Nebraska* for a detailed comparison of Nebraska's employment by industry with the Plains states.

[2]The formula for computing average Nebraska earnings assuming the United States industry employment distribution is:

$$\text{Average Earnings} = \frac{\sum_{i=1}^{65} EMP_{us,i} \times EARN_{neb,i}}{\sum_{i=1}^{65} EMP_{us,i}}$$

where $EMP_{us,i}$ is United States employment in the i^{th} industry and $EARN_{neb,i}$ is average Nebraska earnings in the i^{th} industry.

Graph 1
Average Annual Earnings--U.S. and Nebraska
(excluding Farm)



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